

Application No.: 10/538,923

Docket No.: 4590-421

In the Abstract:

Please delete the Abstract and replace with the following new Abstract.

Application No.: 10/538,923**Docket No.: 4590-421****ABSTRACT**

The invention generally relates to the field of spintronics, a branch of electronics using the magnetic spin properties of electrons. More particularly, the invention relates to the field of spin-valve transistors which can be used in numerous fields of electronics. The invention aims to propose an original arrangement for producing high-level and high-contrast collector currents simultaneously. The inventive spintronics transistor comprises a semiconductor emitter, a base forming a spin valve and a metallic collector separated from the base by an insulating deposit. The emitter/base interface constitutes a Schottky barrier and the base/collector interface constitutes a tunnel-effect barrier.